

Federal Aviation Administration Correspondence



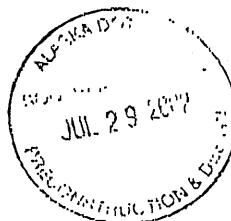
U.S. Department
of Transportation
**Federal Aviation
Administration**

Alaskan Region
Air Traffic Division

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July 22, 2002

Roger K Healy
State Of Alaska, Design &
Engineering
6860 Glacier Highway
Juneau, Alaska 99801-7999



Dear Mr. Healy:

The Federal Aviation Administration has completed our second review of the now six Reasonable Bridge Alternatives that would join the Island of Gravina to the Community of Ketchikan on Revillagigedo Island.

The Air Traffic Division, in consultation with the Juneau Flight Standards District Office (who have regulatory oversight of pilots operating in and around Ketchikan), offers the following findings by alternative for your consideration:

Alternative - C3(a)

This alternative penetrates the horizontal surface by 21 feet and the transitional surface by 37 feet. This analysis assumes a vehicle height of 15 feet.

This alternative does not affect current instrument procedures. It is not anticipated that it will affect future public or special approaches. Special VFR concerns are covered in a separate section.

Alternative - C3(b)

This alternative does not penetrate any aeronautical surfaces and will have no affect on current or known future public or special approaches. Special VFR concerns are covered in a separate section.

Alternative - C4

This alternative penetrates the horizontal surface by 36 feet and the transitional surface by 64 feet. This analysis assumes a vehicle height of 15 feet.

This alternative does not affect current instrument procedures. It is not anticipated that it will affect future public or special approaches. Special VFR concerns are covered in a separate section.

Alternative - D1

This alternative does not penetrate any aeronautical surfaces and will have no affect on current or known future public or special approaches. Special VFR concerns are covered in a separate section.

Alternative - F1

This alternative does not penetrate any aeronautical surfaces and will have no affect on current or known future public or special approaches. Special VFR concerns are covered in a separate section.

Alternative - F3

This alternative does not penetrate any aeronautical surfaces and will have no affect on current or known future public or special approaches. Special VFR concerns are covered in a separate section.

The subject of Special VFR, as it relates to the Revilla Corridor, is complicated with political overtones. The Exemption that allows certain operators special operating procedures is approved at the Headquarters level in Washington D.C. They do get input from the local Flight Standards District Office in Juneau, Alaska.

Please see the attached letter from Mick Green, Principal Operations Inspector, who deals with the Ketchikan area. While his comments are not definitive, they do point to the fact that a lot of variables go into approving, disapproving and/or revoking Exemptions.

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We appreciate the opportunity to comment on the numerous alternatives. If we can be of further assistance, please feel free to contact Jack Schommer, Airspace & Procedures Specialist, at (907) 271-5903, or Mick Green, Principal Operations Inspector, at (907) 586-7532.

Sincerely,



Tony Wylie
Manager, Operations Branch,
AAL-530



U.S. Department of Transportation
Federal Aviation Administration

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July 15, 2002

John Schommer
FAA Obstruction Evaluation Specialist
222 West 7th Ave, #14
Anchorage, AK 99513

Dear Mr. Schommer,

At your request, I have reviewed the 6 Bridge Alternatives between Revillagigedo Island and Gravina Island to determine how each will effect SVFR operations conducted under Exemption 4760 in the Ketchikan area.

The authority to grant, deny or amend an exemption lies only with the Director of Flight Standards, AFS-1. However, because the Juneau FSDO has local knowledge of the SVFR operations in Ketchikan, we often make recommendations to interested parties.

It is my opinion that each of the proposed bridges would require at the least, an amendment to Exemption 4760. Since Exemption 4760 allows aircraft to fly as low as 200ft, obviously a 250 ft high bridge presents an hindrance. If Exemption 4760 is to remain in effect, it's physical boundaries would have to be redrawn to keep traffic away from the bridge and/or its altitudes amended. It is possible that a bridge could create a greater hazard to safety, than the benefits of Exemption 4760 warrant.

Alternatives C3(a), C3(b), C4, and D(1) all propose building a bridge near the airport, which could be considered the center of the Class E Surface Area. These bridges would hinder aircraft flying in bound from the West to Ketchikan Harbor. It is my opinion that if any of these bridges are built, at a minimum the boundaries of Exemption 4760 would have to be modified to exclude any airspace West of the airport. This would greatly reduce the effectiveness of Exemption 4760, to the point that less than 10% of the current operations conducted under Exemption 4760 would still be allowed.

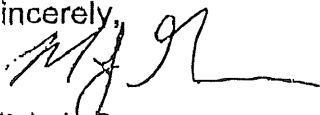
Alternative F(3) proposes building 2 bridges on Pennock Island, which is nearly outside the Class E Surface Area to the East. Both bridges appear to be outside of the current boundaries of Exemption 4760 airspace (as established in the airspace agreement between KTN FSS and the 135 Operators). To

reiterate, the boundaries of Exemption 4760 are significantly smaller than the boundaries of the Class E Surface Area. The bridge nearest to the Exemption 4760 airspace is proposed to be less than 100 feet high. But because of the close proximity of the bridge to the Exemption 4760 airspace, it is my opinion that the east boundaries and possibly the altitudes of Exemption 4760 would still need to be adjusted, but to a lesser degree.

Because each of the proposed bridges is within close proximity to the seaplane landing areas, it is my opinion that aircraft will be able to fly closer than 500 feet to the bridges without violating minimum altitudes because it will be necessary for take off and landing. This will happen during VFR as well as normal SVRF operations. Because of the constant floatplane operations, there will of course be several complaints and conflicts with automobile drivers.

In summary, it is my opinion that each of the Bridge Alternatives would require changes to Exemption 4760, but Alternative F(3) would be the least disruptive. As I stated above, this is my professional opinion. The final authority over exemptions lies with AFS-1.

Sincerely,



Mick J. Green
Principal Operations Inspector

file

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DESIGN & ENGINEERING SERVICES DIVISION SOUTHEAST REGION - DESIGN

June 10, 2002

Mr. Jack Schommer
Federal Aviation Administration
220 West 7th Avenue, #14
Anchorage, Alaska 99513-7587

Subject: Gravina Access Project Impacts on SVFR Operations

Dear Mr. Schommer:

The Gravina Access Project is a high priority project authorized by the Transportation Equity Act of the 21st Century (TEA-21), which allocated approximately \$20 million to "constructing a bridge joining the Island of Gravina to the Community of Ketchikan on Revillagigedo Island." As part of the environmental impact statement process, the Alaska Department of Transportation and Public Facilities (DOT&PF) is currently considering the no-build and nine build alternatives—six bridge alternatives and three ferry alternatives (see Figure 1).

The purpose of this letter is two-fold—the first is to reiterate a August 2001 letter from DOT&PF requesting specific clarification regarding the impact of bridge alternatives on the Special Visual Flight Rules (SVFR) operations within the Ketchikan Class E surface area (see attached), and the second is to request reconfirmation of a September 21, 2000 Federal Aviation Administration (FAA) airspace determination on the then reasonable bridge alternatives (see attached). I am also requesting that you provide me with a schedule of when you expect to complete these tasks by Friday, June 28.

Determination of Potential Impacts with the six Reasonable Bridge Alternatives

HDR and its affiliates have conducted technical studies for the DOT&PF to refine the engineering of the alternatives and evaluate the impacts associated with the options that improve access between Revilla and Gravina islands. These technical studies included an analysis of the air traffic impacts in the Ketchikan airspace resulting from the bridge alternatives.

The DOT&PF is formally requesting that FAA initiate the public process required to define the specific potential impacts of the six bridge alternatives (C3[a], C3[b], C4, D1, F1, and F3) on the regulation that governs SVFR operations, as allowed by 14 CFR Part 93, within the Ketchikan Class E surface area; we understand that this process may take a few months to complete. Once we have the results of this FAA process, the DOT&PF will publish them in the Draft EIS that is due for final agency review in January of 2003. We are also coordinating the project with Alaska Airlines to make sure they understand the bridge alternatives and the potential for impact to their Required Navigation Performance (RNP) procedures.

We at DOT&PF feel strongly that this FAA-initiated public process must be undertaken immediately, and that if it is not, the impacts to the Draft EIS and the project will be substantial. Because of the importance of this information to our project, Duane Hippe and Mark Dalton of HDR Alaska have assured me that they are also fully committed to supporting you and the FAA and to expediting this public process in any way that they can.

Airspace Determination for All Reasonable Alternatives

The DOT&PF is in the process of requesting that the state and federal concurrence agencies approve minor modifications to the reasonable alternatives and approve the addition of a previously rejected alternative (F1) to the mix of reasonable alternatives. The reasonable bridge alternatives (and the no-build alternative) are described in the paragraphs below. *We are requesting some confirmation that the airspace determination outlined in a letter from the FAA to Verne Skagerberg (DOT&PF) dated September 21, 2000 (see attached) are still accurate. In addition, we are seeking an airspace determination for the no-action alternative as well—please indicate whether or not the existing condition would remain unchanged with the selection of the no-build alternative.*

No-Build Alternative

The no-build Alternative would not result in improved access between Gravina Island and Revillagigedo Island. Access to Ketchikan International Airport and Gravina Island from Revillagigedo Island would continue to be possible only from the existing airport ferry shuttle, private boat, and floatplane. There is no construction associated with this alternative.

Alternative C3(a)

Alternative C3(a) (see Figure 2) is a bridge that would span Tongass Narrows approximately 500 meters (1,600 feet) north of the airport terminal. The main span of the bridge would have a navigational vertical clearance of 61 meters (200 feet), a total height of 77 meters (253 feet), and a horizontal clearance of approximately 168 meters (550 feet). The vertical and horizontal clearances of the main span would allow for one-way passage of cruise ships and two-way passage for most other ships, including Alaska State ferries. The bridge would connect to Signal Road on Revillagigedo Island and would traverse the hillside south, gaining elevation and turning southwest to cross Tongass Avenue and Tongass Narrows, and then turning south to parallel the airport runway and touch down south of the terminal. An airport return loop road would connect the terminal to the bridge. The road would continue around the south end of the airport runway and then arc north, extending parallel to and west of the airport runway approximately 3.5 kilometers (2.2 miles) to the north end of the Airport Reserve property. The road at the south end of the runway would be constructed at a grade low enough to allow for future runway expansion plans.

Alternative C3(b)

Alternative C3(b) (see Figure 3), a variant of Alternative C3(a), involves a lower bridge structure and a slightly different alignment. Alternative C3(b) includes a 37-meter (120-foot) high bridge with a 152-meter (500-foot) wide main span and a 60-meter (197-foot) total height, providing navigational clearance for Columbia-class ferries, but not for larger cruise ships. This variant would have the same general alignment on Revilla and Gravina Islands as Alternative C3(a); however, the bridge over Tongass Narrows would be positioned approximately 300 meters (1,000 feet) farther north. With this alignment, the bridge would touch down (reach the ground surface) in front of the airport terminal and eliminate the need for an airport return loop road.

Alternative C4

Alternative C4 (see Figure 4) is a bridge that would span Tongass Narrows approximately 500 meters (1,600 feet) north of the airport terminal. The main span of the bridge would have a navigational vertical clearance of 61 meters (200 feet), a total height of 76 meters (250 feet), and a horizontal clearance of approximately 168 meters (550 feet). The vertical and horizontal clearances of the main span would allow for one-way passage of cruise ships and two-way passage for most other ships, including state ferries, under the bridge. The bridge would connect to Tongass Avenue north of Cambria Drive and would continue north, traversing the hillside around the quarry, crossing over Tongass Avenue and Tongass Narrows, and then turning south to parallel the airport runway, and touch down south of the terminal. An airport return loop road would connect the terminal to the bridge. The road would continue around the south end of the airport runway and then arc north, extending parallel to and west of the airport runway approximately 3.5 kilometers (2.2 miles) to the north end of the Airport Reserve property. The road at the south end of the runway would be constructed at a grade low enough to allow for future runway expansion plans.

Alternative D1

Alternative D1 (see Figure 5) is a bridge that would span Tongass Narrows directly across from the airport terminal. The bridge would be 37 meters (120 feet) high, have a total height of 55 meters (182 feet), and have a horizontal span of 152 meters (500 feet), providing navigational clearance for Columbia class ferries, but not larger cruise ships. The bridge would start at Tongass Avenue near the airport ferry terminal, rise along the hillside behind the quarry, turn west to cross over Tongass Avenue and Tongass Narrows, and then turn south to parallel the shoreline on Gravina Island. An airport return loop road would connect the terminal to the bridge. The road would continue around the south end of the airport runway and then arc north, extending parallel to and west of the airport runway approximately 3.5 kilometers (2.2 miles) to the north end of the Airport Reserve property. The road at the south end of the runway would be constructed at a grade low enough to allow for future runway expansion plans.

Alternative F1

Alternative F1 (see Figure 6) crosses Pennock Island and the east and west channels of Tongass Narrows. This alternative would start at Tongass Avenue just north of the cemetery, rise to the south along the hillside behind the cemetery and the U.S. Coast Guard Base, and then turn west and cross over Tongass Avenue and the east channel of Tongass Narrows to Pennock Island with an approximately 61-meter (200-foot) high bridge that has a total height of 81 meters (267 feet). This alternative would cross Pennock Island at grade and then use a second, approximately 37-meter (120-foot) high bridge to extend over the west channel of Tongass Narrows to Gravina Island. The horizontal clearance of the east channel bridge would be approximately 168 meters (550 feet) wide and the west channel bridge would provide approximately 160 meters (525 feet) of horizontal clearance (the natural channel for large vessels requiring 5-fathom depth on the west side is approximately 450 feet). The east channel and west channel bridges would be 1.3 and 0.6 kilometers (0.8 and 0.4 miles) long, respectively.

From the west channel bridge, the road would continue north approximately 9.5 kilometers (5.9 miles) to the north end of the Airport Reserve property in the same alignment as F3. An airport access road would be constructed at the south end of the airport runway and turn north to the airport terminal. The road at the south end of the runway would be constructed at a grade low enough to allow for future runway expansion plans.


Alternative F3

Alternative F3 (see Figure 7) crosses Pennock Island and the east and west channels of Tongass Narrows. This alternative would start at Tongass Avenue south of the U.S. Coast Guard Base and north of the Forest Park Subdivision and cross the east channel of Tongass Narrows to Pennock Island with an approximately 18-meter (60-foot) high bridge. The alternative would cross Pennock Island at grade and then use a second 61-meter (200-foot) high bridge over the west channel to Gravina Island that has a total height of 78 meters (255 feet). The horizontal clearance of the west channel bridge would be approximately 168 meters (550 feet) wide, which is wider than the natural channel (approximately 450 feet) available for large vessels requiring 5-fathom depth. The west channel bridge is designed to accommodate larger cruise ships. From the west channel bridge, the road would continue north approximately 9.5 kilometers (5.9 miles) to the north end of the Airport Reserve property. An airport access road would be constructed at the south end of the airport runway and turn north to the airport terminal. The road at the south end of the runway would be constructed at a grade low enough to allow for future runway expansion plans.

To summarize, the purpose of this letter is two-fold—the first purpose is to *request initiation of the public process to determine the impact of bridge alternatives on the SVFR operations* within the Ketchikan Class E surface area and the second is to *request confirmation of the airspace determination on the reasonable bridge alternatives*. We at DOT&PF are interested in clearly defining any foreseeable impacts on the aviation industry and possible mitigating measures should one of the six bridge alternatives be constructed.

Please accept my sincere thanks for your continued participation in this important project. If I may be of further assistance, please do not hesitate to call me at (907) 465-1821 or Duane Hippe of HDR Alaska at (907) 274-2000.

Sincerely,



Roger K. Healy
Engineering Manager

Enclosures

Cc: Representative Bill Williams, Ketchikan
Tim Haugh, FHWA
Clarence Goward, FAA
Jim Lomen, FAA
Mark Dalton, HDR Alaska

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION
SOUTHEAST REGION PRECONSTRUCTION DESIGN

TONY KNOWLES, GOVERNOR

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November 9, 2000

Mr. Ronnie Simpson
Airports Division
Federal Aviation Administration
222 West 7th Avenue, Box #14
Anchorage, Alaska 99513-7587

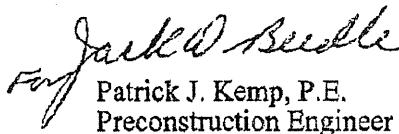
Dear Mr. Simpson:

The Alaska Department of Transportation and Public Facilities (DOT & PF) in cooperation with the Federal Highway Administration (FHWA) has initiated an environmental impact statement (EIS) for the Ketchikan - Gravina Island Bridge project. The purpose of this project is to construct a bridge or other crossing alternatives between Gravina Island and Revillagigedo Island in Ketchikan Alaska. The project's scoping process has been underway for approximately one year. DOT & PF will be seeking agency concurrence on the range of reasonable crossing alternatives within the next two months. The preparation of the Draft EIS will commence following agency concurrence.

During upcoming phases, this project will require studies of airspace encroachments at the Ketchikan International Airport. Because of your agency's jurisdiction over these determinations we are requesting FAA to be a Cooperating Agency. As a Cooperating Agency your participation would encompass those areas under your jurisdiction and may include evaluation, analysis, and/or review of the EIS and technical appendices. To date, DOT & PF has very much appreciated FAA's involvement in the project as members of the Project Development Team.

If you have any questions or would like to discuss in more detail the project or your agency's roles and responsibilities during the preparation of this EIS, please contact Roger Healy, Engineering Manager, at (907) 465-1821.

Sincerely,


Patrick J. Kemp, P.E.
Preconstruction Engineer

Cc: Roger Healy, P.E.
Engineering Manager



U.S. Department
of Transportation
Federal Aviation
Administration

Alaskan Region
Air Traffic Division

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SEP 21 2000

Verne Skagberg
State of Alaska, DOT/PP
P.O. Box 196900
Anchorage, Alaska 99519-6900

Dear Mr. Skagberg:

The Federal Aviation Administration has completed our review of the 7 proposed alternatives for the Gravina Access Project, Ketchikan, Alaska.

We offer the following findings by alternative for your consideration:

Alternative "D" (Aeronautical Study # 00-AAL-0009-OE)

In the bridge only configuration, no penetrations were identified. In the draw bridge configuration the horizontal surface would be exceeded by 66 feet. This could be mitigated through lighting since it would only be in the raised position for short periods of time.

This alternative does not affect current instrument procedures. However, with new criteria being developed utilizing Wide Area Augmentation (WAAS) of the Global Positioning System (GPS), it would prevent future reductions in approach minimums (down to as low as 200 feet above the touch down zone elevation).

Alternative "C-2" (Aeronautical Study # 00-AAL-0010-OE)

This penetrates the horizontal surface by 46 feet and the transitional surface by 82 feet. This analysis assumes a vehicle height of 15 feet. We find this alternative to be OBJECTIONABLE.

This alternative does not affect current instrument procedures, but would have the same affect as "D" on future possibilities.

Alternative "C-1" (Aeronautical Study # 00-AAL-0011-OE)

This penetrates the horizontal surface by 42 feet and the transitional surface by 95 feet. This analysis assumes a vehicle height of 15 feet. We find this alternative to be OBJECTIONABLE.

This alternative does not affect current instrument procedures, but would have the same affect as "D" on future possibilities.

Alternative "F-2" (Aeronautical Study # 00-AAL-0012-OE)

Alternative "B" (Aeronautical Study # 00-AAL-0013-OE)

Alternative "F-1" (Aeronautical Study # 00-AAL-0014-OE)

Alternative "A" (Aeronautical Study # 00-AAL-0015-OE)

These alternatives no not penetration any aeronautical surfaces and will have no affect on current or known future approaches.

It should be noted that OBJECTIONABLE determinations can be mitigated through marking and lighting, if the public comment process indicates that the users and community desire such. However, it should be noted that lower approach minimums would/could be lost due to the obstruction.

If you have questions, or need additional information, please contact this office at (907) 271-5903.

Sincerely,



John J. Schommer
Obstruction Evaluation
Specialist, FAA

Pat

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

OFFICE OF THE COMMISSIONER

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August 1, 2001

Pat Poe, Administration
Alaska Division
Federal Aviation Administration, Alaska Region
222 West 7th Avenue, Box # 14
Anchorage, Alaska 99513

Dear Mr. Poe:

Congressman Young has stated a hard link connection between Ketchikan and Gravina Island is one of his top transportation priorities for Alaska. The Department of Transportation and Public Facilities (DOT&PF) is developing an Environmental Impact Statement (EIS) for this project and we are in need of important FAA comments. I have decided to write to you directly so that the importance of the issues are understood by your agency and to reinforce our resolve for complying with the Congressman's wishes.

To that end we need specific input for each alternative on several issues for airport and aircraft operations; Enclosures A, B, and C provide further detail. These issues are:

1. Does the FAA foresee any long-term airside or landside impacts that would prevent or limit Ketchikan International Airport (KTN) operations? If so, could these impacts be mitigated? If so, how? To assist in this evaluation we have enclosed potential ultimate development scenarios which build upon on-going airport master planning. We believe these scenarios can accommodate estimated long-term airport growth. (see Enclosure D).
2. Will any of the alternatives impact existing or planned instrument approaches to either runway 11 or 29 at KTN? This would include VFR, IFR, and special IFR operations. Could these impacts be mitigated and, if so, how?
3. Are the alternatives presented in the enclosures consistent with 19 CFR Part 493, "Ketchikan International Airport Special Airport Traffic Rule," as it is currently written and interpreted? How would any of the alternatives impact the special VFR? If any alternatives are inconsistent with the rule, are there changes to the CFR and/or the alternatives that could be made to make them consistent? If so, how?
4. Are the alternatives consistent with the recommended standard VFR arrival and departure procedures and patterns as developed by FAA and the Tongass Pilots

Mr. Pat Poe

Page 2

August 1, 2001

Association? If any alternatives are inconsistent, what changes to the standard procedures and/or the alternatives would make them consistent?

Your response and recommendations will help the DOT&PF, the community of Ketchikan, and aircraft users better evaluate the remaining alternatives for the Gravina Access Project. If we can be of any further assistance in expediting your review, with either additional technical information or briefings, please do not hesitate to call Roger Healy, DOT&PF Project Manager, at 907-465-1821.

We would appreciate your response by August 24, 2001.

Sincerely,



Joseph L. Perkins, P.E.
Commissioner

Enclosures

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

DESIGN & ENGINEERING SERVICES DIVISION
SOUTHEAST REGION - DESIGN

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September 7, 1999

Mr. James W. Lomen, P.E.
Planning and Programming Branch
Airports Division
Federal Aviation Administration, Alaska Region
222 West 7th Avenue, Box #14
Anchorage, Alaska 99513

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File Topic 1 4.1.2 ☐
File Topic 2 _____ ☐
File Topic 3 _____ ☐
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File Topic 5 _____ ☐
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Subject: Gravina Access Project, DOT&PF Project Number 67698

Dear Mr. Lomen:

Please find enclosed a copy of the draft *Tongass Narrows Aviation Conditions Summary*, prepared by HDR Alaska, Inc. and provided for your review. This document represents a summary of the existing aviation conditions within the Tongass Narrows. It is our hope to address your comments before distribution to other Gravina Access Project team members and agencies. Please contact Josh Hedberg or Duane Hippe of HDR at 274-2000 to discuss specifics. We look forward to hearing from you soon.

Please feel free to call with any questions or comments.

Sincerely,

ADOT&PF



Al Steininger, P.E.
Project Manager

cc: Mark Dalton, HDR
Larry Kyle, HDR